



37X/0430 #5

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Christopher Tuan et al.

Serial No. 09/890,445

Filing Date: July 30, 2001

HEATED BRIDGE DECK SYSTEM  
AND MATERIALS AND METHOD FOR  
CONSTRUCTING THE SAME

Attorney Docket No. UNVN.69827

Examiner:

Art Unit:

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TECHNOLOGY CENTER R3700

CERTIFICATE OF MAILING  
37 C.F.R. 1.8

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In compliance with the duty to disclose information material to patentability pursuant to 37 C.F.R. Section 1.56, it is requested that this Information Disclosure Statement be entered and the documents listed below and on the enclosed Form PTO-1449 be considered by the Examiner and made of record:

**PATENTS (Including Inventor, Patent No., and Issue Date)**

Herbert Pfersch, Device For Heating Surfaces Subject To Strong Mechanical Stresses Or Considerably Varying Atmospheric Conditions, U.S. Patent No. 3,377,462, April 9, 1968.

Louis David Minsk, Electrically Conductive Asphaltic Concrete, U.S. Patent No. 3,573,427, April 6, 1971.

Tanei et al., Heating Unit And Method For Production Thereof, U.S. Patent No. 4,301,356, November 17, 1981.

Germundson, Electric Heating Element, U.S. Patent No. 4,697,063, September 29, 1987.

Matsuhashi et al., Carbon Fiber-Reinforced Cementitious Composite And Method For Producing The Composite, U.S. Patent No. 5,030,282, July 9, 1991.

Xie et al., Conductive Cement-Based Compositions, U.S. Patent No. 5,447,564, Sept. 5, 1995.

Zaleski et al., Electrically Conductive Paving Mixture and Pavement System, U.S. Patent No. 5,707,171, January 13, 1998.

Herbert Pferschy, Electric Road Surface Heaters, Canadian Patent No. 836117, March 3, 1970.

Kenneth G. Payne, et al., Electrically Conductive Carbon Fiber-Reinforced Cement Heating Element, Canadian Patent No. 1,117,579, February 2, 1982.

The Electricity Council, Improvements in or Relating to Concrete, Great Britian Patent 1,363,429, August 14, 1974.

#### **OTHER DOCUMENTS (Including Author, Title, Relevant Pages, and Place of Publication, Date)**

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J.R. Farrar, Electrically Conductive Concrete, GEC Journal of Science and Technology, Vol. 45, No. 1, pp. 45-48, 1978.

H.W. Whittington, J. McCarter, and M.C. Forde, The Conduction of Electricity Through Concrete, Magazine of Concrete Research, Vol. 33, No. 114, pp. 48-60, March 1981.

P. Xie, and J. J. Beaudoin, Electrically Conductive Concrete and Its Application in Deicing, Advances in Concrete Technology Proceedings of the Second CANMET/ACI International Symposium, pp. 399-417, Las Vegas, Nevada, USA, 1995.

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S. Yehia and C. Y. Tuan, Bridge Deck Deicing, Crossroads 2000 Proceedings, Iowa State University, Ames, Iowa, August 19-20, 1998.

S. Yehia and C. Y. Tuan, Conductive Concrete Overlay, Concrete Engineering International, Vol. 3, No. 1, pp. 70-72, January/February 1999.

S. Yehia and C. Y. Tuan, Conductive Concrete Overlay for Bridge Deck Deicing, ACI Materials Journal, Vol. 96, No. 3, pp. 382-390, May/June 1999.

S. Yehia, C. Y. Tuan, D. Ferdon and B. Chen, Conductive Concrete Overlay for Bridge Deck Deicing: Mixture Proportioning, Optimization and Properties, ACI Materials Journal, Vol. 97, pp. 172-181, March/April 2000.

S. Yehia and C. Y. Tuan, Thin Conductive Concrete Overlay for Bridge Deck Deicing and Anti-icing, Transportation Research Board, 79th Annual Meeting, Washington, D.C., January 9-13, 2000.

Sasaki Mikio, Fujita Shigetaka, Kaga Takuya, Noyama Nobuji, Abstract for Snow Melting System with Electric Heating using Photovoltaic Power Generation, Bulletin of Hachinohe Institute of Technology, Vol. 16, pp. 107-116, 1997.

Copies of the above-referenced documents are enclosed.

Respectfully submitted,



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